Maryland Historical Trust

Maryland Inventory of Historic Properties number: CARR-156

Name: PEARCE RD. OVER SAMS CRK.

The bridge referenced herein was inventoried by the Maryland State Highway Administration as part of the Historic Bridge Inventory, and SHA provided the Trust with eligibility determinations in February 2001. The Trust accepted the Historic Bridge Inventory on April 3, 2001. The bridge received the following determination of eligibility.

MARYLAND HISTORICAL TRUST

Eligibility Recommended X Eligibility Not Recommended _____

Criteria: ___A ___B ___C ___D Considerations: ___A ___B ___C ___D ___E ___F ___G __None

Comments: _____

Reviewer, OPS: Anne E. Bruder Date: 3 April 2001

Reviewer, NR Program: Peter E. Kurtze Date: 3 April 2001

MARYLAND INVENTORY OF HISTORIC BRIDGES **MHT No.** CARR-156
HISTORIC BRIDGE INVENTORY
MARYLAND STATE HIGHWAY ADMINISTRATION/
MARYLAND HISTORICAL TRUST

SHA Bridge No. CL-241 **Bridge name** Pearre Road over Sams Creek

LOCATION:
Street/Road name and number [facility carried] Pearre Road

City/town New Windsor **Vicinity** X

County Carroll

This bridge projects over: Road ____ **Railway**___ **Water** X___ **Land** _____

Ownership: State _____ **County** X__ **Municipal** _____ **Other** _____

HISTORIC STATUS:
Is bridge located within a designated historic district? Yes _____ **No** X_____
National Register-listed district X____ **National Register-determined-eligible district** ____
Locally-designated district _____ **Other** _____

Name of district _____

BRIDGE TYPE:
Timber Bridge _____:
Beam Bridge _____ **Truss -Covered** ____ **Trestle** _____ **Timber-And-Concrete** ____

Stone Arch Bridge ___

Metal Truss Bridge X

Movable Bridge _____:
Swing _____ **Bascule Single Leaf** ____ **Bascule Multiple Leaf** __
Vertical Lift __ **Retractile**_____ **Pontoon** _____

Metal Girder _____:
Rolled Girder _____ **Rolled Girder Concrete Encased** _____
Plate Girder _____ **Plate Girder Concrete Encased** _____

Metal Suspension ___

Metal Arch __

Metal Cantilever ____

Concrete ____:
Concrete Arch_____ **Concrete Slab**_____ **Concrete Beam** ____ **Rigid Frame** _____

Other _____ **Type Name** _____

CARR-156

DESCRIPTION:

Describe Setting:

Bridge No. CL-241, built in 1908, carries Pearre Road over Sams Creek on the Carroll County - Frederick County border. The bridge is oriented in the east-west direction, while the creek flows north to south. The bridge is located in a rural wooded area directly behind the nineteenth-century McKinstry mill, in the Hopewell National Register District.

Describe Superstructure and Substructure:

The structure is a single-lane, single-span, steel Warren pony truss carrying two-way traffic. The 63'-0" span is comprised of four panels measuring 15'-9" each. The top chord is a built up member of face to face channels with a top cover plate. The verticals and diagonals are all made with two angles connected with batten plates and rivets. The verticals stiffen the diagonals that define the Warren truss. The bottom chord is constructed with two angles connected with batten plates also. The deck system consists of I-shaped stringers with timber cross planks all supported by I-shaped floorbeams at the panel points. The floorbeams are suspended from the vertical members. All joints are connected by gusset plates and rivets. The abutments are constructed of stone with concrete parging. Stone wingwalls flank the corners of each abutment.

Discuss Major Alterations:

In 1989, the original timber planks, floorbeams, and stringers were all replaced. The original truss still remains.

HISTORY:

WHEN was bridge built (actual date or date range) 1908
This date is: Actual X **Estimated** _____
Source of date: Plaque X **Design Plans** ___ **County bridge files/inspection form** X
Other (specify) State inventory form

WHY was bridge built? To provide a reliable crossing of Pearre Road over Sams Creek to meet local transportation needs.

WHO was the designer _____

WHO was the builder York Bridge Company - builder and/or designer

WHY was bridge altered? [check N/A _____if not applicable] Structural needs/ safety

Was bridge built as part of organized bridge-building campaign? Yes ____ **No** X

SURVEYOR/HISTORIAN ANALYSIS:

This bridge may have National Register significance for its association with:
A - Events X **B- Person** _____
C- Engineering/architectural character X

Was bridge constructed in response to significant events in Maryland or local history? No_ **Yes** X
If yes, what event?

This bridge was one of a large number of metal truss bridges erected in Maryland in the late nineteenth and early twentieth centuries. These bridges, which were stronger and more reliable than the majority of their predecessors, were part of a major advance in bridge technology in Maryland and throughout the nation in the third quarter of the nineteenth century.

When the bridge was built and/or given a major alteration, did it have a significant impact on the growth & development of the area? No Yes __X__ If yes, what impact?

Because of their solidity, metal truss bridges such as the Pearre Road bridge provided reliable crossings, largely free from the dangers of floods and other disasters that regularly destroyed many of their predecessors. By assuring travelers that Pearre Road could be safely and reliably passed throughout the year, this bridge promoted small-scale residential , commercial, agricultural, and industrial development along the road and other thoroughfares that fed into it. Though their impacts were quite localized, bridges such as this, taken *en masse*, were an important factor in the development of rural areas throughout the state.

Is the bridge located in an area which may be eligible for historic designation? No _ Yes _____ Would the bridge add to _____or detract from _____historic & visual character of the possible district?

Is the bridge a significant example of its type? No _ Yes _X____ If yes, why?

Between 1840 and the Civil War, under the impetus of a rapidly expanding railroad system, the majority of early American metal truss bridge forms were patented and introduced. In Maryland, the earliest metal truss bridges carried rail lines, which required their great strength and reliability. From the War through the end of the century, metal truss technology was improved, steel began to replace iron, and the use of trusses was expanded to carry roads as well as rail lines.

Numerous metal truss bridges were erected in Baltimore, the original hub of the metal truss in the state, from the 1850s through the 1880s. From Baltimore, the use of the metal truss spread out to other parts of the state, particularly the Piedmont and Appalachian Plateau. Many bridge and iron works were established in the eastern United States to design and fabricate truss members, which were then shipped to sites in Maryland and elsewhere to be erected. More than 15 different bridge companies located in Maryland, Ohio, Pennsylvania, New York, Virginia, and Indiana are known to have shipped metal truss bridges to sites throughout Maryland. Bridges were first fabricated in Maryland, and shipped to sites within the state and beyond, by the companies of seminal bridge designer Wendel Bollman.

Early in the twentieth century, concrete bridges began to compete with metal truss bridges throughout the state at small to moderate crossings. With the development of uniform standards for concrete bridges by the State Roads Commission in the 1910s, the construction of smaller metal truss bridges significantly declined throughout the state. The metal truss still remained the bridge of choice for large crossings, however. In the 1920s, heavier members began to be used at these bridges. Reflecting even heavier load requirements and increased lengths, metal truss bridges erected in the state in the 1930s and 1940s were heavy and solid, rather than light and delicate like their late-nineteenth- and early-twentieth-century predecessors.

British engineers James Warren and Willoughby Monzoni patented the Warren truss bridge in 1846. The form originally was a series of equilateral triangles in which the diagonals carried the tensile and compressive forces. Subsequent verticals added to the form served only to brace the triangular web system between the parallel top and bottom chords. The Warren truss was built throughout the country from the middle of the nineteenth well into the twentieth century. Judging from the few surviving Warren truss bridges in Maryland, however, it was used in a very limited fashion in the state. Two examples of the type in the state are bridges A-111 (c.1910) in Allegany County and CL-241 (1908) in Carroll County.

The bridge's use of a pony truss--a truss which has no lateral bracing connecting the top chords of its superstructure--is unusual in the state. Pony trusses probably comprise no more than about 20 percent of Maryland's metal truss bridges.

This bridge was erected during one of the three key periods (1840-1860, 1860-1900, and 1900-1960) of bridge construction in Maryland. Built in 1908, it falls within the period 1900-1960. During this era, metal truss highway bridges became increasingly standardized. Also during this period, smaller and moderate length trusses were gradually replaced by reinforced concrete structures, and the modern metal girder bridge, which could easily be widened, replaced the metal truss bridge at all but the largest

approaches and crossings. Built early in the century, it is characterized by relatively delicate members, rather the heavy solid members that characterize its successors.

Does bridge retain integrity [in terms of National Register] of important elements described in Context Addendum? No ___ Yes X_____ If no, why?

Is bridge a significant example of work of manufacturer, designer and/or engineer? No__ Yes X_ If yes, why?
In the late nineteenth and early twentieth centuries, numerous metal truss bridge fabricating companies sprang up around the country that shipped bridge components to crossings for assembly on site. Among them was the York Bridge Company of York, Pennsylvania, which fabricated Pratt, Warren, and Parker trusses erected in Maryland in the early twentieth century. These included bridges CL-227 (1911) and CL-241 (1908) in Carroll County and F-407 (1914) and F-506 (1908) in Frederick County.

Should bridge be given further study before significance analysis is made? No X_ Yes _____
It is believed that no further evaluation is necessary to determine the eligibility of this bridge for listing in the National Register. However, additional research, which could be conducted as part of any future National Register nomination prepared for the bridge, might provide further information about its history and environs.

BIBLIOGRAPHY:

Bridge inspection reports and files of the Carroll County engineer's office.

County survey files of the Maryland Historical Trust.

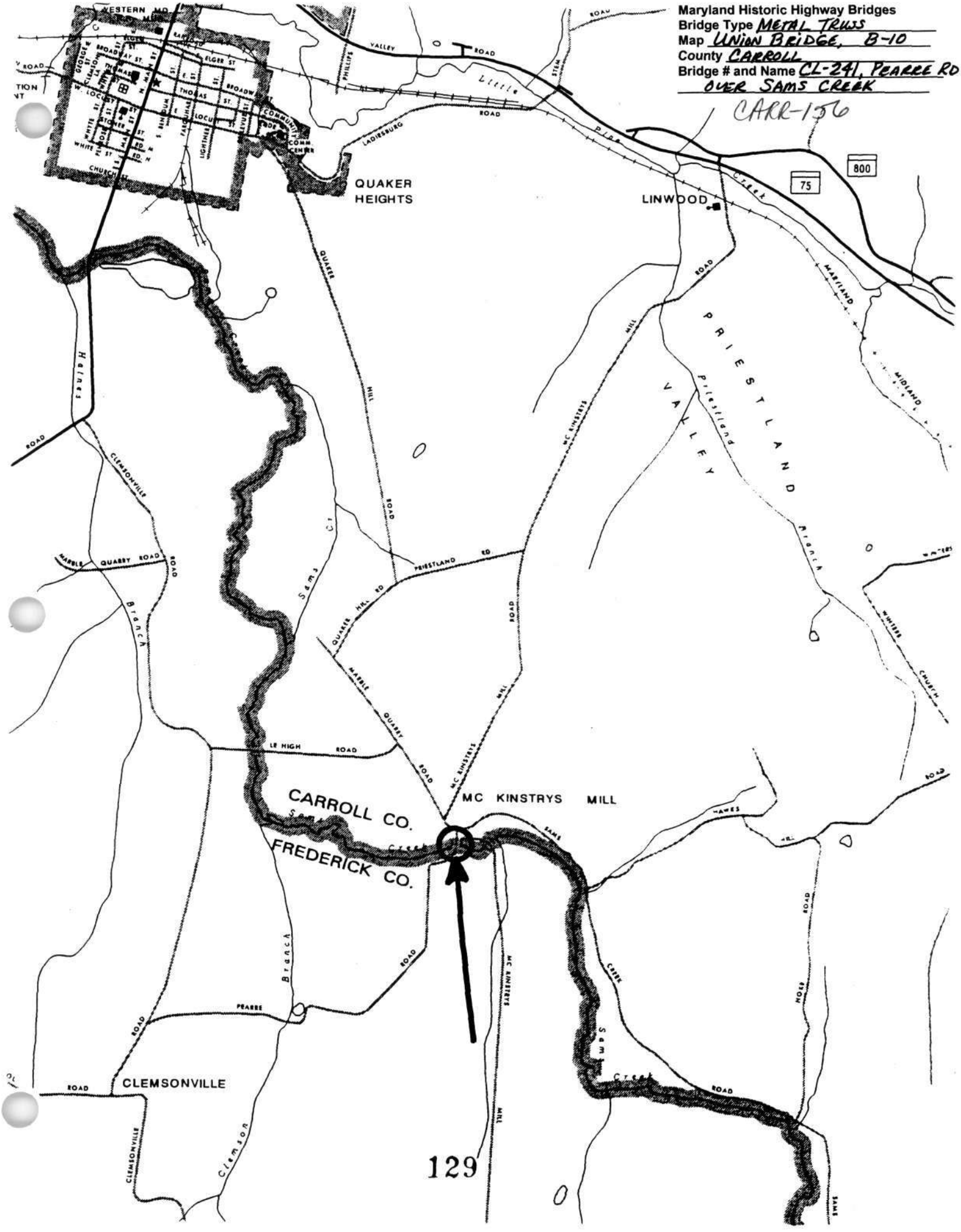
Jackson, Donald H. *Great American Bridges and Dams*. Washington, D.C: The Preservation Press, 1968

P.A.C. Spero & Company and Louis Berger & Associates, Inc. *Historic Bridges in Maryland: Historic Context Report*. Prepared for the Maryland State Highway Administration, September, 1994.

Pennsylvania Historical and Museum Commission and Pennsylvania Department of Transportation. *Historic Highway Bridges in Pennsylvania*. Commonwealth of Pennsylvania, 1986.

State inventory form CARR-156

SURVEYOR/SURVEY INFORMATION:
Date bridge recorded 2/6/95
Name of surveyor David Diehl/Marvin Brown
Organization/Address GREINER, INC., 2219 York Road, Suite 200, Timonium, Maryland 21093-3111
Phone number 410-561-0100 **FAX number** 410-561-1150


Maryland Historic Highway Bridges
Bridge Type METAL TRUSS
Map UNION BRIDGE, B-10
County CARROLL
Bridge # and Name CL-241, PEARRE RD. OVER SAMS CREEK
CARR-156
QUAKER HEIGHTS
LINWOOD
PRIESTLAND VALLEY
CARROLL CO.
FREDERICK CO.
MC KINSTRYS MILL
CLEMSONVILLE
800
75

CARR-156/F-8-111
Warren Truss Bridge, Bridge CL 241
McKinstry's Mill Road, Union Bridge
Jennifer K. Cosham, 12 April 2006

Facing southwest


RESTRICTED
BRIDGE
SPEED
LIMIT
10
WEIGHT
LIMIT
3
TONS

Inventory # CARR-156
CL241
Name Pearre Rd. over Sams Creek
County/State Carroll Co. Md.
Name of Photographer D. Diehl
Date 2-95

Location of Negative SHA

Description north approach looking south

Number 1 of 35

6 '01

Inventory # CARR-156
CL241
Name Pearre Rd. over Sams Creek
County/State Carroll Co. Md.
Name of Photographer D. Diehl
Date 2-95

Location of Negative SHA

Description East elevation looking west

Number 2 of 5

Inventory # CARR-156
CL 241
Name Pearre Rd. over Sams Creek
County/State Carroll Co. Md.
Name of Photographer D. Dieal
Date 2-95

Location of Negative SHA

Description west elevation looking northeast

Number 3 11 of 32 5


RESTRICTED
BRIDGE
SPEED
LIMIT
10
WEIGHT
LIMIT
3
TONS

Inventory # CARR-156

CL241
Name Pearre Rd. over Sams Creek
County/State Carroll Co. Md.
Name of Photographer D. Diehl
Date 2-95

Location of Negative SHA

Description south approach looking north

Number 4 12 of 35

Inventory # CARR-156

CL241

Name Pearre Rd. over Sams Creek

County/State Carroll Co. Md.

Name of Photographer D. Diehl

Date 2-95

Location of Negative SHA

Description plaque on bridge end chord

Number ~~13~~ 5 of ~~32~~ 5

950358

INDIVIDUAL PROPERTY/DISTRICT
MARYLAND HISTORICAL TRUST
INTERNAL NR-ELIGIBILITY REVIEW FORM

Property/District Name: Pearre Road Bridge Survey Number: CARR-156

Project: Rehabilitation of Pearre Road Bridge Agency: FHWA/Carroll County

Site visit by MHT Staff: X no ___ yes Name _____ Date _____

Eligibility recommended X Eligibility **not** recommended _____

Criteria: X A ___B X C ___D Considerations: ___A ___B ___C ___D ___E ___F ___G ___None

Justification for decision: (Use continuation sheet if necessary and attach map)

Under Criteria A, the Pearre Road Bridge derives its significance from its association with the development of transportation in Carroll County. Metal truss bridges represent an important step in engineering design and a uniquely American achievement, the result of intensive experimentation in the 19th century. Relatively cheap and easy to build, these bridges were constructed in large numbers throughout the state in the late 19th and early 20th centuries. Because of their solidity, metal truss bridges such as the Pearre Road Bridge provided reliable crossings and promoted development. Although their impacts were quite localized, bridges such as this were an important factor in the development of rural areas throughout the state, when considered as a whole. Carroll County undoubtedly had scores of such bridges; however, as technology and use requirements have changed, they have been replaced at an increasing rate. According to a recently completed inventory of historic metal truss bridges, only two remain on public roads in Carroll County. The other metal truss, Mumma Ford Road over Monocacy Creek (CARR-1) has been substantially altered by the insertion of a modern arch truss system.

The Pearre Road Bridge is significant under Criterion C as one of only a few surviving Warren truss bridges in Maryland. Built in 1908, it is characterized by relatively delicate members, as compared to the rather heavy members that characterize later 20th century bridges. Of particular note is the retention of the plaque giving manufacturer and date. The Pearre Road Bridge was manufactured by the York Bridge Company, a major source of metal truss bridges in Maryland in the first decades of the 20th century.

The Pearre Road Bridge has been determined eligible by the Bridge Review Committee, composed of State Highway Administration and Maryland Historical Trust Staff, which is currently evaluating all historic highway bridges in Maryland. In addition, though not specifically mentioned in the National Register form, the bridge could be considered a contributing resource in the National Register listed property known as Hopewell (F-8-130; F-8-131; F-8-132; and, CARR-150), which encompasses over 257 acres in Frederick and Carroll Counties.

Documentation on the property/district is presented in: Project File, Maryland Inventory Form CARR-156

Prepared by: Fredi Eckhardt (1978), Greiner Inc. (1995)

Elizabeth Hannold — October 26, 1995
Reviewer, Office of Preservation Services — Date

NR program concurrence: ✓ yes ___ no ___ not applicable

Orlando Rabouin ✓ — 10-26-95
Reviewer, NR program — Date

Survey No. CARR-156

MARYLAND COMPREHENSIVE HISTORIC PRESERVATION PLAN DATA - HISTORIC CONTEXT

I. Geographic Region:

____	Eastern Shore	(all Eastern Shore counties, and Cecil)
____	Western Shore	(Anne Arundel, Calvert, Charles, Prince George's and St. Mary's)
__X__	Piedmont	(Baltimore City, Baltimore, Carroll, Frederick, Harford, Howard, Montgomery)
____	Western Maryland	(Allegany, Garrett and Washington)

II. Chronological/Developmental Periods:

____	Paleo-Indian	10000-7500 B.C.
____	Early Archaic	7500-6000 B.C.
____	Middle Archaic	6000-4000 B.C.
____	Late Archaic	4000-2000 B.C.
____	Early Woodland	2000-500 B.C.
____	Middle Woodland	500 B.C. - A.D. 900
____	Late Woodland/Archaic	A.D. 900-1600
____	Contact and Settlement	A.D. 1570-1750
____	Rural Agrarian Intensification	A.D. 1680-1815
____	Agricultural-Industrial Transition	A.D. 1815-1870
__X__	Industrial/Urban Dominance	A.D. 1870-1930
____	Modern Period	A.D. 1930-Present
____	Unknown Period (___ prehistoric	___ historic)

III. Prehistoric Period Themes:

____	Subsistence
____	Settlement
____	Political
____	Demographic
____	Religion
____	Technology
____	Environmental Adaption

IV. Historic Period Themes:

____	Agriculture
__X__	Architecture, Landscape Architecture, and Community Planning
____	Economic (Commercial and Industrial)
____	Government/Law
____	Military
____	Religion
____	Social/Educational/Cultural
__X__	Transportation

V. Resource Type:

Category: Structure

Historic Environment: Rural

Historic Function(s) and Use(s): transportation - vehicular

Known Design Source: York Bridge Company

CARR-156
WARREN TRUSS BRIDGE
New Windsor Vicinity
Private 1908

Built in 1908, this Warren steel truss bridge spans 50-70 feet across Little Pipe Creek, which runs into the Monocacy River. All diagonal and vertical members are of open-work steel, and crossing is of wood planks. Built by the Yorkbridge Company of York, Pennsylvania, it is a reminder of the late 19th century and early 20th century structures that dotted the American landscape. An interesting note is that it divides Carroll and Frederick Counties for it lies over that natural boundary.

CARR-156
MAGI# 0701563717

MARYLAND HISTORICAL TRUST

INVENTORY FORM FOR STATE HISTORIC SITES SURVEY

1 NAME

HISTORIC

AND/OR COMMON
Warren Truss Bridge

2 LOCATION

STREET & NUMBER
Borders Carroll & Frederick Counties over Sam's Creek (Little Pipe Creek)

CITY, TOWN
New Windsor X VICINITY OF

CONGRESSIONAL DISTRICT

STATE
Maryland

COUNTY
Carroll

3 CLASSIFICATION

CATEGORY	OWNERSHIP	STATUS	PRESENT USE	
__DISTRICT	X PUBLIC	__OCCUPIED	__AGRICULTURE	__MUSEUM
__BUILDING(S)	__PRIVATE	X UNOCCUPIED	__COMMERCIAL	__PARK
X STRUCTURE	__BOTH	__WORK IN PROGRESS	__EDUCATIONAL	__PRIVATE RESIDENCE
__SITE	**PUBLIC ACQUISITION**	**ACCESSIBLE**	__ENTERTAINMENT	__RELIGIOUS
__OBJECT	__IN PROCESS	__YES: RESTRICTED	__GOVERNMENT	__SCIENTIFIC
	__BEING CONSIDERED	X YES: UNRESTRICTED	__INDUSTRIAL	X TRANSPORTATION
		__NO	__MILITARY	__OTHER:

4 OWNER OF PROPERTY

NAME
Carroll County Roads Department Telephone #:

STREET & NUMBER

CITY, TOWN

STATE, zip code

__ VICINITY OF

5 LOCATION OF LEGAL DESCRIPTION

Liber #: None
Folio #: None

COURTHOUSE, REGISTRY OF DEEDS, ETC. Carroll County Office Bldg.

STREET & NUMBER
Center Street

CITY, TOWN
Westminster

STATE
Md.

6 REPRESENTATION IN EXISTING SURVEYS

TITLE

DATE

__FEDERAL __STATE __COUNTY __LOCAL

DEPOSITORY FOR SURVEY RECORDS

CITY, TOWN

STATE

CARR-156

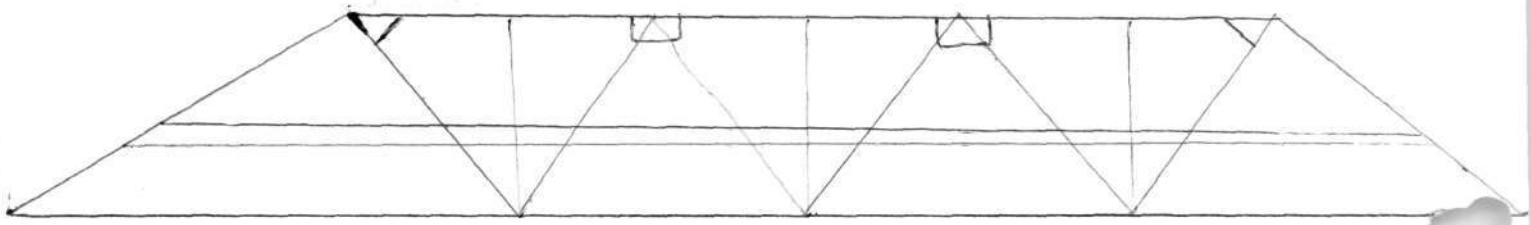
7 DESCRIPTION

CONDITION		CHECK ONE	CHECK ONE
_EXCELLENT	_DETERIORATED	X UNALTERED	X ORIGINAL SITE
X GOOD	_RUINS	_ALTERED	_MOVED DATE_____
_FAIR	_UNEXPOSED		

DESCRIBE THE PRESENT AND ORIGINAL (IF KNOWN) PHYSICAL APPEARANCE

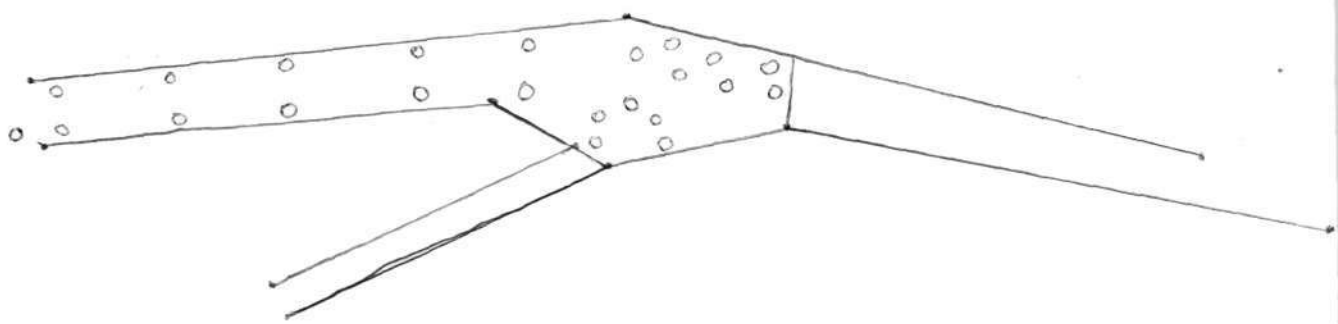
This steel truss bridge located directly behind McKinstry Mill was built by the York Bridge Company, York, Pennsylvania in 1908. The structure is built over Little Pipe Creek which is a natural border of Carroll and Frederick Counties. The border is in the north/west midsection of Carroll County. Little Pipe runs into the Monocacy River.

The bridge is triangular in outline, but does not have true equilateral triangles; therefore, it not a "true" Warren truss type. The four triangles are supported by vertical members to stiffen the structure. The end joints appear to be riveted:



Along bottom half of each half of open-work topless bridge runs lattice-work of verticals made of steel. Apparently, this is simply used for safety precautions as a guard rail.

Vertical and diagonal members are of same steel construction and size. Entire bridge is steel, except for wood crossing. Approximately 50-70 feet in length.



CONTINUE ON SEPARATE SHEET IF NECESSARY

CARR-156

8 SIGNIFICANCE

PERIOD	AREAS OF SIGNIFICANCE -- CHECK AND JUSTIFY BELOW				
__PREHISTORIC	__ARCHEOLOGY-PREHISTORIC	__COMMUNITY PLANNING	XX LANDSCAPE ARCHITECTURE	__RELIGION	
__1400-1499	__ARCHEOLOGY-HISTORIC	__CONSERVATION	__LAW	__SCIENCE	
__1500-1599	__AGRICULTURE	__ECONOMICS	__LITERATURE	__SCULPTURE	
__1600-1699	__ARCHITECTURE	__EDUCATION	__MILITARY	__SOCIAL/HUMANITARIAN	
__1700-1799	__ART	__ENGINEERING	__MUSIC	__THEATER	
__1800-1899	__COMMERCE	__EXPLORATION/SETTLEMENT	__PHILOSOPHY	X TRANSPORTATION	
X 1900-	__COMMUNICATIONS	__INDUSTRY	__POLITICS/GOVERNMENT	__OTHER (SPECIFY)	
		__INVENTION			

SPECIFIC DATES 1908 BUILDER/ARCHITECT York Bridge Co., York, Pa.

STATEMENT OF SIGNIFICANCE

Steel truss bridges, derived from previous wooden constructions, were built for safety, strength, and durability. Between 1850 and 1925, the metal truss bridge was very common and often prefabricated by specialized bridge companies such as the York Bridge Company.

The Warren truss from was patented in 1848, and was quickly adopted because of its simple functional and structural form. Although this type of structure is still being produced, it will someday assuredly become obsolete. Many early bridges prior to 1908, as well as those built during this period have been destroyed to make way for more modern structures.

On Carroll County side, a plack reads: (Bottom 1/2 torn off)

George E. Benson
George W. Brown
John S. Fink
comm'rs.

On Frederick side:

Wm. H. Hogarth
L. H. Bowlus
H. M. Dinterman
J. S. Annan
comm'rs.
E. H. Albaugh, clerk

CONTINUE ON SEPARATE SHEET IF NECESSARY

CARR-156

9 MAJOR BIBLIOGRAPHICAL REFERENCES

CONTINUE ON SEPARATE SHEET IF NECESSARY

10 GEOGRAPHICAL DATA

ACREAGE OF NOMINATED PROPERTY _____

VERBAL BOUNDARY DESCRIPTION

Lies over natural boundary of Little Pipe Creek dividing Carroll and Frederick Counties, in McKinstry Mill area.

LIST ALL STATES AND COUNTIES FOR PROPERTIES OVERLAPPING STATE OR COUNTY BOUNDARIES

STATE	COUNTY
Maryland	Carroll
Maryland	Frederick

11 FORM PREPARED BY

NAME / TITLE

Fredi Eckhardt/Historic Sites Surveyor

ORGANIZATION: Carroll County Committee of the Maryland Historical Trust

DATE: August 16, 1978

STREET & NUMBER: 210 E. Main Street

TELEPHONE: 848-6494

CITY OR TOWN: Westminster

STATE: Maryland

The Maryland Historic Sites Inventory was officially created by an Act of the Maryland Legislature, to be found in the Annotated Code of Maryland, Article 41, Section 181 KA, 1974 Supplement.

The Survey and Inventory are being prepared for information and record purposes only and do not constitute any infringement of individual property rights.

RETURN TO: Maryland Historical Trust
The Shaw House, 21 State Circle
Annapolis, Maryland 21401
(301) 267-1438

CARR. - 156

Steel Truss bridge by Mckinstry Mill

July/78

J.P.E.

CARR. — 156

Steel Truss bridge by Mckinstry Mill

July/78

J. P. E.